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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,042	03/05/2001	Branden Clark Bickley	016295.0662	2780

7590 02/28/2003
Kevin R. Imes
Baker Botts L.L.P.
One Shell Plaza
910 Louisiana
Houston, TX 77002-4495

EXAMINER

SHECHTMAN, SEAN P

ART UNIT PAPER NUMBER

2125

DATE MAILED: 02/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/800,042

Applicant(s)

BICKLEY ET AL.

Examiner

Sean P. Shechtman

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 & 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
It does not state that the person making the oath or declaration believes the named inventor or inventors to be the original and first inventor or inventors of the subject matter which is claimed and for which a patent is sought.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

Fig. 1, elements 107a, 108a, 109a, 110a, 114, and 115.

Fig. 2, elements 216 and 218.

Fig. 4, element 406.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Fig. 2, element 216d.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the aggregator must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Method and system for monitoring resources within a manufacturing environment.

6. The disclosure is objected to because of the following informalities:

The application numbers of the related applications are missing (Page 1, lines 3 and 7).

The word "ore" (Page 7, line 11), should be "or".

The word "shiiping" (Page 16, line 4), should be "shipping".

Appropriate correction is required.

Claim Objections

7. Claims 1, 8, and 15 are objected to because of the following informalities:

Claim 1 should be rephrased “a remote monitoring system coupled to one or more pieces of equipment within the manufacturing facility, said pieces of equipment operable to produce build to order products;

the remote monitoring system communicatively coupled to a control center, said control center operable to display status information associated with using the one or more pieces of equipment; and

the monitoring system operable to determine an operating status of the one or more pieces of equipment relative to a ship criteria associated with producing the build to order products”.

Claims 8 and 15 should be rephrased “a method and a medium including encoded logic for monitoring resources within a build to order manufacturing facility comprising the logic operable to:

access information resources for selective portions of a manufacturing facility, said resources associated with one or more pieces of equipment, said equipment remotely located from a control center for the manufacturing facility, said control center operable to produce build to order products;

determine an operating status of the one ore more pieces of equipment relative to a ship criteria associated with manufacturing the products; and

display the status within a user interface of the control center”

Appropriate correction is required.

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1-21 are directed towards a “ship criteria” that is not enabled by the specification. Although the disclosure mentions the “ship criteria” several times, there is no description of what the “ship criteria” actually is. It is the position of the examiner that a criteria is a standard, rule, or test on which a judgment or decision can be based. Applicant fails to disclose such standard, rule or test. Therefore the examiner is unable to ascertain the metes and bounds of this limitation in the claims and the prior art rejection below is based on the claims as best interpreted by the examiner.

Claim 3 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of aggregating information (Page 11, lines 26-29), does not reasonably provide enablement for an aggregator, said aggregator being coupled to one or more information sources associated with the control center, and said aggregator operable to consolidate real-time information relating to status information. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The specification states the “control center may employ one or more software programs to access

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WIP profiles for aggregating information related to manufacturing thereby allowing effecting management of resources within manufacturing facility” (Page 11, lines 26-29), therefore, for purposes of examination it will be assumed that the claim 3 is as follows:

The system of claim 1, wherein said control center is operable to aggregate information related to manufacturing.

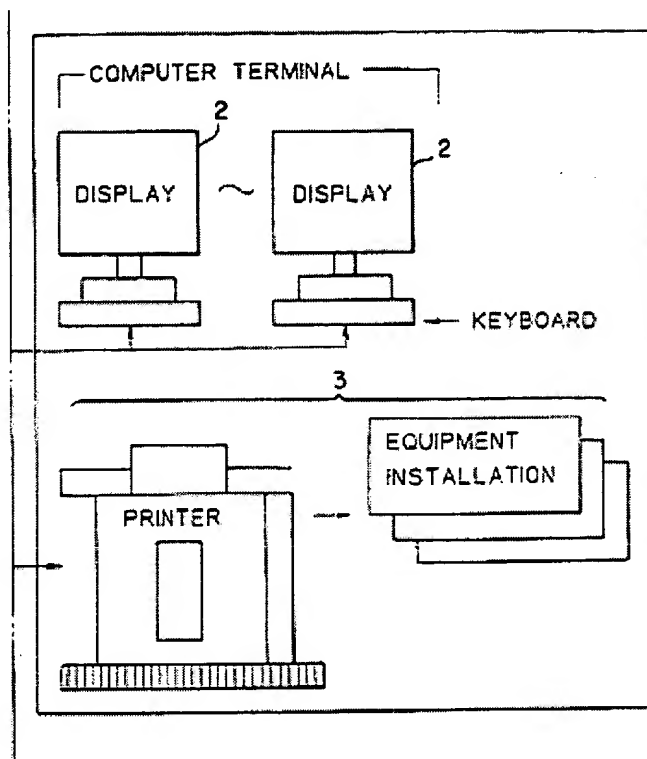
Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-4, 7-9, 14-16, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,579,231 to Sudou et al.

Referring to claim 1, Sudou et al. discloses a system for monitoring resources (Col. 4, lines 26-54) within a build to order manufacturing facility (Abstract; Col. 1, lines 11-16; Col. 4, lines 7-18; Col. 11, lines 10-30; Col. 43, lines 51-67) comprising:

a remote monitoring system (Col. 43, lines 32-50; Col. 44, lines 45-54) coupled to one or more pieces of equipment within the manufacturing facility (Fig. 7B, element 2; Fig. 8A, element 27; Col. 8, lines 60-68), said pieces of equipment operable to produce build to order products (Abstract, lines 7-10; Col. 1, lines 28-33);



the remote monitoring system communicatively coupled to a control center (Col. 4, lines 2-6; Col. 9, lines 1-24), said control center operable to display status information associated with using the one or more pieces of equipment (Col. 9, lines 25-29; Col. 12, lines 24-40; Col. 13, lines 8-19; Col. 16, lines 12-26; Fig. 48; Col. 33, lines 31-48); and

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PARTS NAME	IC 11
LOT CODE	901A00
SHELF NAME	SLC SHA
SHELF DRAWING NUMBER	EO4B - 3012 - C002
PRODUCT NUMBER	0011111 NA
DELIVERED CUSTOMER	XX TELEPHONE OFFICE
SHELF PRODUCTION YEAR AND MONTH	90-12
SHELF PRODUCT NUMBER	1000
SHELF SERIAL NUMBER	01A
PCB INSTALLATION POSITION	FIRST ROW
PCB NAME	8SLCB
PCB DRAWING NUMBER	E 20B - 4514 - R000
PCB SERIAL NUMBER	05B
PCB PRODUCTION YEAR AND MONTH	9012
PCB PRODUCT NUMBER	0001

the monitoring system operable to determine an operating status of the one or more pieces of equipment relative to a ship criteria associated with producing the build to order products (Fig. 7A, elements 15a and 12; Fig. 8B, elements 41-45; Col. 4, lines 1-2; Col. 9, lines 56-62; Col. 10, lines 37-44; Col. 11, lines 1-9; Col. 12, lines 18-23; Col. 16, lines 56-65; Col. 20, lines 26-32).

Referring to claim 2, Sudou et al. discloses the system above, further comprising plural pieces of equipment operably associated with one or more locations within the manufacturing facility (Col. 3, line 59 – Col. 4, line 14; Col. 9, lines 30-44; Col. 10, lines 15-31).

Referring to claim 3, Sudou et al. discloses the system above, wherein said control center is operable to aggregate information related to manufacturing (Figs. 22a & 24a; Col. 6, lines 21-37; Col. 18, lines 43-67; Col. 23, lines 11-25).

Referring to claim 4, Sudou et al. discloses the system above, further comprising one or more remote access terminals within the manufacturing facility operable to provide access to the

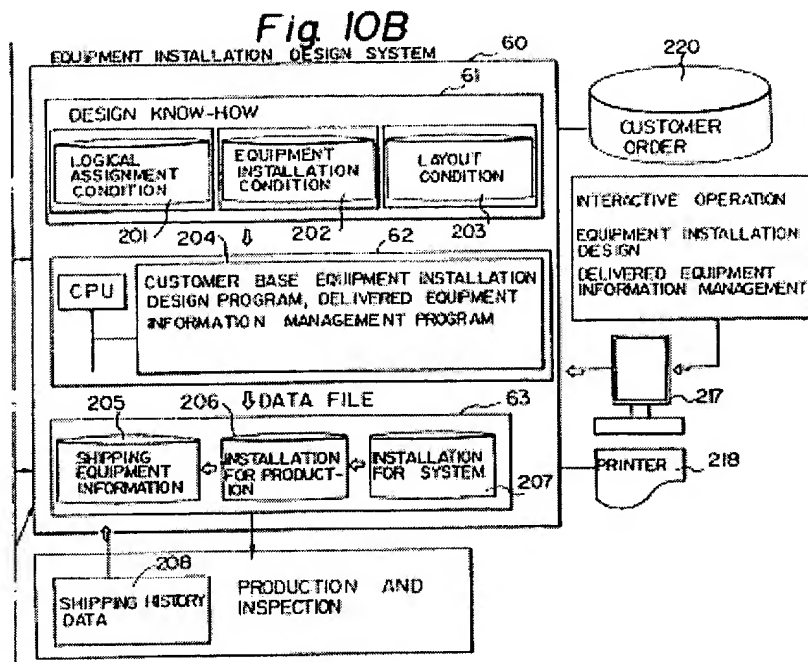
remote monitoring system (Fig. 7B, element 2; Fig. 8A, element 27; Fig. 8B, element 46; Col. 8, lines 60-68; Col. 10, lines 61-67).

Referring to claim 7, Sudou et al. discloses the system above, further comprising a process monitor operable to monitor a process that uses the one or more pieces of equipment (Fig. 8B, i.e. floor control unit; Col. 5, lines 23-26).

Referring to claims 8 and 15, Sudou et al. discloses a method and a medium including encoded logic (Col. 11, lines 1-9; Col. 13, lines 1-36; Fig. 10A & 10B) for monitoring resources (Col. 4, lines 26-54) within a build to order manufacturing facility (Abstract; Col. 1, lines 11-16; Col. 4, lines 7-18; Col. 11, lines 10-30; Col. 43, lines 51-67; Col. 20, lines 45-68) comprising the logic operable to:

access information resources for selective portions of a manufacturing facility (Col. 20, lines 34-36), said resources associated with one or more pieces of equipment, said equipment remotely located (Fig. 10A & 10B; Col. 43, lines 32-50; Col. 44, lines 45-54) from a control center for the manufacturing facility, said control center operable to produce build to order products (Abstract, lines 7-10; Col. 1, lines 28-33; Col. 20, lines 38-44);

determine an operating status of the one or more pieces of equipment relative to a ship criteria associated with manufacturing the products (Fig. 10A & B; Fig. 5, lines 31-34); and



display the status within a user interface of the control center (Col. 9, lines 25-29; Col. 12, lines 24-40; Col. 13, lines 8-19; Col. 16, lines 12-26; Fig. 48; Col. 33, lines 31-48).

Referring to claim 9 and 16, Sudou et al. discloses the method and the medium above, further comprising logic operable to: access a log to obtain information for monitoring the equipment (Col. 25, lines 1-14);

determine if an error has occurred with one of the pieces of equipment; notify the control center of the error; and update the status for the piece of equipment (Col. 25, lines 1-29).

Referring to claims 14 and 21, Sudou et al. discloses the method and the medium above, further comprising logic operable to associate a process with the one or more pieces of equipment to provide a process monitor (Fig. 8B, i.e. floor control unit; Col. 5, lines 23-26).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 6, 11, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,579,231 to Sudou et al. as applied to claims 1, 8, and 15 above, further in view of U.S. Patent No. 5,321,605 to Chapman et al.

Referring to claim 6, Sudou et al. discloses the system above, further comprising a network interface communicatively (Col. 44, lines 46-54) coupled to one or more of the pieces of equipment and operable to communicate information (Col. 4, lines 2-6; Col. 9, lines 1-24) to provide the operating status associated with the one or more pieces of equipment (Col. 9, lines 25-29; Col. 12, lines 24-40; Col. 13, lines 8-19; Col. 16, lines 12-26; Fig. 48; Col. 33, lines 31-48).

Referring to claims 11 and 18, Sudou et al. discloses the method and the medium above, further comprising the logic operable to provide information from remote locations within the manufacturing facility (Col. 43, lines 32-50; Col. 44, lines 45-54).

Referring to claims 6, 11, and 18, Sudou et al. fails to disclose that said information is communicated/provided in real time.

However, referring to claims 6, 11, and 18, Chapman et al. discloses a process flow information management system (title) that operates in real time to maintain a dependency memory structure within memory that informationally links resources with lots, and thus records

and manages the allocations of resources to the lots which have been started as work-in-progress (Col. 6, lines 50-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the system of Sudou et al to operate in the real time environment of Chapman et al. to maintain a dependency memory structure within memory that informationally links resources with lots, because plans that are cooperatively controlled in real time optimize actual resource-lot allocations in the environment (Col. 7, lines 1-11 of '605).

11. Claims 5, 10, 12, 13, 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,579,231 to Sudou et al. as applied to claims 1, 8, 9, 15, and 16 above, further in view of U.S. Patent No. 5,586,021 to Fargher et al.

Referring to claim 5, Sudou et al. fails to disclose the system above, further comprising a simulator communicatively coupled to the remote monitoring system and operable to simulate allocating resources based on an error associated with the one or more pieces of equipment.

Referring to claims 10 and 17, Sudou et al. fails to disclose the method and the medium above, further comprising logic operable to: determine a reallocation of resources within the facility using a one or more WIP profiles; reallocate the resources in response to the equipment encountering the error.

Referring to claims 12 and 19, Sudou et al. fails to disclose the method and the medium above, further comprising logic operable to automatically reallocate resources upon determining an error associated with a malfunctioning piece of equipment.

Referring to claims 13 and 20, Sudou et al. fails to disclose the method and the medium above, further comprising the logic operable to route product to a different portion of the manufacturing facility in response to determining the error.

However, Referring to claims 5, 10, 12, 13, 17, 19, and 20 Fargher et al. discloses a method and system for production planning (title), using computer integrated manufacturing software (i.e. logic) (Col. 4, lines 8-16) comprising:

A planner to input information such as the progress of lots within the shop and status of the work in progress (WIP) (Col. 4, lines 28-29; Col. 5, lines 6-12; Col. 2, lines 22-53)

The planner 10 system may interact with a simulator 20 in two distinct modes.

First, the planner 10 may provide a static work release plan, generated using some initial factory status, which provides the simulator 20 with a work release time table.

Second, the planner 10 may provide a dynamic release plan (i.e. allocation of resources), which is updated in response to simulated events (such as machine failure, i.e. simulation based on error of equipment) during simulation execution (Col. 6, lines 54-67).

Fargher et al. utilizes a plan representation which has been chosen to model the manufacturing environment in enough detail to achieve the planning functions, while allowing incremental updates due to replanning (i.e. reallocation of resources in response to the equipment encountering the error) (Col. 7, lines 13-18). It is inherent that machine failure is an equipment error.

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the system of Sudou et al to operate with the computer integrated manufacturing software of Fargher et al., because with this method solutions which

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appear unpromising at an early stage in the search are quickly discarded, whereas those which appear more promising are more thoroughly searched. Another advantage is that 'disjoint' plan representations, in which no resources may be available for an extended period of time due to factory shut-down, do not prevent new work from being planned, as long as sufficient processing capacity exists within the plan representation (Col. 2, line 63 – Col. 3, line 5).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents and publications are cited to further show the state of the art with respect to a system for monitoring resources within a manufacturing facility.

U.S. Patent No. 5,896,292 Hosaka et al.

U.S. Pub. No. 2001/0027350 A1 Koga et al.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (703) 305-7798.

The examiner can normally be reached on Monday-Friday from 9:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard, can be reached on (703) 308-0538. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

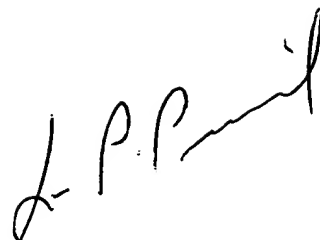
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SPS

Sean P. Shechtman

February 14, 2003

A handwritten signature in black ink, appearing to read "L. P. Picard", written diagonally across the page.

**LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**